LONDON-WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA7 | Colne Valley

Survey reports (CH-004-007)

Cultural heritage

November 2013

ES 3.5.2.7.7

VOL 5

LONDON-WEST MIDLANDS
ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA7 | Colne Valley

Survey reports (CH-004-007)

Cultural heritage

November 2013

ES 3.5.2.7.7

Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

A report prepared for High Speed Two (HS2) Limited.

High Speed Two (HS2) Limited,
Eland House,
Bressenden Place,
London SW1E 5DU

Details of how to obtain further copies are available from HS2 Ltd.

Telephone: 020 7944 4908

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.hs2.org.uk

recycle

Printed in Great Britain on paper
containing at least 75% recycled fibre.

Contents

List of tables

1 Introduction

1.1 Structure of the cultural heritage appendices

1.1.1 The cultural heritage appendices for the Colne Valley community forum area (CFA7) comprise:

- baseline reports (Volume 5: Appendix CH-001-007);
- a gazetteer of heritage assets (Volume 5: Appendix CH-002-007);
- an impact assessment table (Volume 5: Appendix CH-003-007); and
- survey reports (this appendix).

1.1.2 Maps referred to throughout the cultural heritage appendices are contained in the Volume 5 Cultural Heritage Map Book.

1.1.3 Where appropriate, sites or assets discussed within report have been cross referenced with the gazetteer of heritage assets (Volume 5: CH-002-009) via the unique identifiers, and can be viewed on maps CH-01-023 to CH-01-025a and CH-02-011 in the Volume 5, Cultural Heritage Map Book.

1.2 Surveys undertaken

1.2.1 This appendix contains the results of a fully-integrated remote sensing survey incorporating light detection and ranging (LiDAR), hyperspectral imagery and aerial photographic analysis of the majority of the Proposed Scheme.

1.3 Surveys proposed but not undertaken

1.3.1 No additional archaeological surveys were proposed within the Colne Valley study area.

2 Remote sensing survey report

2.1 Introduction

2.1.1 This report outlines the results of the archaeological remote sensing survey of the Colne Valley community forum area. This was an archaeological survey involving the systematic analysis, interpretation, mapping and recording of archaeological sites from aerial photographs and LiDAR imagery.

2.1.2 The aim was to accurately map and record the form and extent of archaeological features visible as cropmarks, soilmarks, earthworks or structures on a range of different remote sensed imagery for the study area, in order to inform the baseline assessment of the cultural heritage resource.

2.1.3 The study area has not been covered by an English Heritage national mapping programme project. The Thames Valley national mapping programme project area[1] falls to the south-west, and the area covered by the Hertfordshire national mapping programme project[2] lies to the north. As such, there is no existing systematic survey of archaeological features visible on remote-sensed sources for the study area.

The study area

2.1.4 The study area for this remote sensing survey covers the entire length of the Colne Valley study area, which falls across the junction of Buckinghamshire, Hertfordshire and the Greater London Authority.

2.1.5 The study area generally comprised a 700m-wide strip centred on the route (350m either side of the centre line). This provided a buffer sufficient to offer contextual information for all recorded sites. Where the route boundary extended beyond the edge of the 700m-wide strip, the study area was expanded to the limit of the remote sensing survey boundary shown in Figures CH-004-07.01 to CH-004-07.07.

2.1.6 In total archaeological remote sensing survey for the Colne Valley study area covered an area of approximately 7km².

2.2 Methodology

2.2.1 In order to provide consistency with other similar datasets, namely English Heritage national mapping programme mapping, the archaeological remote sensing survey was carried out in broad accordance with the current version of the English Heritage national mapping programme standards[3]. The interpretations applied to identified features are consistent with the preferred terms within the English Heritage *Monument Type Thesaurus*[4].

Sources: modern aerial photographs

2.2.2 High resolution (12.5cm) vertical aerial orthophotography taken specifically for the purposes of the Proposed Scheme was made available for this survey. This imagery was captured during 2012. It generally consists of a 700m-wide strip centred on the route, although it is slightly wider in some areas. It was viewed digitally within a geographical information system (GIS) program. The level of accuracy of the orthorectification is such that features mapped from this source should be within 15cm of true ground position.

2.2.3 Pre-existing vertical aerial orthophotography dating from the 1990s and 2000s was also made available for this project. This was supplied under the pan-government agreement. The resolution is 25cm. The level of accuracy of the orthorectification is such that features mapped from this source should be within 1.5m of true ground position[5]. This vertical imagery was also viewed on-screen within GIS.

Sources: Historic aerial photographs

2.2.4 All readily available historic vertical and oblique aerial photographs held in archives were also consulted for this project. This included photographs held at the English Heritage Archive (formerly the National Monuments Record) and the Cambridge University Unit for Landscape

[1] Fenner, V.E.P., (1994), *The Thames Valley Project: a report for the National Mapping Programme*, RCHME Aerial Survey Report Series.
[2] Fenner, V.E.P., (1992) ,*Crop Marks in Hertfordshire: a report for the National Mapping Programme*, RCHME internal document.

[3] Winton, H., (2012), *Standards for National Mapping Programme projects, Version 0.1* Draft, English Heritage, Aerial Investigation and Mapping, Typescript document.
[4] English Heritage; *NMR Monument Type Thesaurus*; http://thesaurus.englishheritage.org.uk/thesaurus.asp?thes_no=1; Accessed: August 2012–June 2013.
[5] GeoStore; *Aerial Photography RGB Product*; http://www.geostore.com/geostore4/WebStore?xml=geostore4/xml/productsAPRGB.xml; Accessed: August 2013.

Modelling. The latter is also referred to as the Cambridge University Collection of Aerial Photography.

2.2.5 The 469 historic vertical aerial photographs of the study area in the English Heritage Archive (see Table 5) were taken for non-archaeological purposes between 1940 and 1998, by organisations such as the Royal Air Force (RAF) and the Ordnance Survey (OS). These photographs often captured sites of historic interest incidentally, especially those shots taken in the first half of the 20th century, before archaeological remains may have been damaged or destroyed by the intensification of arable farming.

2.2.6 The 125 historic oblique aerial photographs of the study area in the English Heritage Archive (see Table 6) were taken between 1921 and 2010 and usually targeted known sites of architectural or archaeological interest. They were typically taken at a much larger scale than the 'blanket' vertical aerial photography and were often timed to capture images of archaeological sites when they were at their most visible, i.e. when dry ground conditions favoured the development of clear cropmarks, or when low winter sun would reveal subtle earthworks.

2.2.7 Twenty Cambridge University Collection of Aerial Photography aerial photographs fell within the study area (see Table 7). These were vertical aerial photographs dating from 1981 and 1985. As with the English Heritage aerial photographs, these vertical aerial photographs had the potential to inadvertently capture evidence of archaeological remains.

2.2.8 All aerial photographs in the English Heritage and Cambridge University Collection of Aerial Photography archives which fell within the study area were viewed in person and examined stereoscopically and under magnification where applicable. Copies were obtained where potential archaeological features were identified and the relevant photographs were considered to be of use either for transcription or for reference purposes.

Sources: LiDAR imagery

2.2.9 High resolution LiDAR data acquired specifically for the purposes of the project was made available for this survey. This data was captured in 2012. It generally consists of a 700m-wide strip centred on the route although it is slightly wider in some areas.

2.2.10 The resolution of the data supplied was 20cm. The level of accuracy of the orthorectification was such that features mapped from this source should be within 15cm of true ground position. The raster digital elevation model was viewed directly within GIS. The digital elevation model is LiDAR data that has been processed to provide a representation of the ground surface without objects such as vegetation or buildings. This means that archaeological earthworks can be revealed on the LiDAR imagery, even if they lie beneath areas of woodland[6].

Sources: hyperspectral imagery

2.2.11 Hyperspectral imagery was not available for CFA7.

Sources: historic environment record data

2.2.12 Data from the Buckinghamshire, Hertfordshire and Greater London Authority Historic Record Environment (HER) was supplied for the purposes of this study. These records were used as a reference to aid interpretation of features visible on remote sensed imagery, either through a pre-existing identification of a visible feature, or by providing information that could help characterise the likely cultural heritage resource of the area.

2.2.13 The HER data was supplied as points, lines and polygons, with identifying attribute data attached. Full monument record reports were also supplied as a portable document format document. The data supplied covered the entirety of the Buckinghamshire, Hertfordshire and Greater London Authority areas, creating an ample buffer to provide contextual information for any archaeological sites of interest, within the boundary of the remote sensing study area.

Sources: National record of the historic environment data

2.2.14 Monument data from the national record of the historic environment was supplied by English Heritage. This data was used as a reference to aid interpretation of features visible on remote sensed imagery, either through a pre-existing identification of a visible feature, or by providing information that could help characterise the likely cultural heritage resource of the area.

2.2.15 This data was supplied as points, lines and polygons with identifying attribute data attached. Full monument record reports were also supplied as a portable document format document. The data covered a 10km-wide strip (5km each side of the route centre line) thereby providing an ample buffer beyond the boundary of the remote sensing study area.

Sources: cartographic sources

2.2.16 Historic OS mapping was geo-referenced and viewed digitally in GIS. Epochs 1–4 of the 1:2500 scale County Series maps, which typically date from 1898 onwards, were used as a reference to aid interpretation of features visible on the remote sensed imagery.

2.2.17 In general, where features such as field boundaries, trackways, extractive pits or ponds were marked on a historic OS map, they were not mapped and recorded as part of this survey. This is because the objective of this project was to add to the known record, not duplicate it. Nevertheless, where the full extent or form of a feature was not recorded in its entirety on the historic maps, it was included in the transcription for this project.

Interpretation, rectification and mapping

2.2.18 All vertical and oblique images from the sources identified above were systematically examined for any archaeological features visible as cropmarks, soilmarks, earthworks or structures. In accordance with best practice for remote sensing surveys, all available sources for each field or land parcel were viewed in conjunction in order to enable the most accurate interpretation possible.

2.2.19 Where archaeological features were visible on the LiDAR or aerial orthophotography, a detailed transcription, including all visible elements of the site in question, was carried out in ArcMap 10.1.

[6] This can sometimes depend upon the time of year that the LiDAR imagery was captured.

2.2.20 Where additional sites, features or details were visible on the historic aerial photographs from the English Heritage Archive, these images were rectified using the computer program Aerial 5.33 prior to their import into ArcMap for transcription.

2.2.21 Digital OS MasterMap 1:1250 base maps were used to establish control points (it should be noted that even when 1:1250 scale data is obtained, the scale of the mapping for rural areas is only in fact 1:2500[7]). Six or more control points were used for each photograph, with errors kept below 1m for each control point. This provided accuracy of less than 1m to the base map for the rectified photographs.

2.2.22 A Digital Terrain Model (DTM) in the form of 5m point data was used in order to further refine the accuracy of the rectifications.

2.2.23 The OS advise that their 1:1250 scale MasterMap data has an accuracy of 0.5m root mean square error for urban areas and 1.1m root mean square for rural areas[8]. Therefore, archaeological features transcribed from photographs rectified using this data will on average be accurate to within 1m–2m of their British national grid coordinates.

2.2.24 As already noted, in order to ensure consistency with other similar remote sensing datasets, this project was carried out in broad accordance with current national mapping programme standards and guidance. As such the identified features were transcribed onto the standard national mapping programme drawing layers using standard national mapping programme conventions[9] as detailed in Table 1.

Table 1: Layers used in GIS for digital transcription of archaeological features[10]

Layer name	Colour	Description
Bank	Red	Defines the outline of positive features such as boundary banks or windmill mounds. Thin banks, or those too diffuse to define accurately, are included on this layer as a single line.
Ditch	Green	Defines the outline of negative features such as boundary ditches or hollow ways. Thin ditches, or those too diffuse to define accurately, are included on this layer as a single line.
Large cut feature	Blue	Defines the outline of sizeable negative features such as quarries or extractive pits.
Levelled ridge and furrow outline or direction	Magenta	Defines the outline of a single block of ridge and furrow seen either as a cropmark or an earthwork later known to have been levelled. Arrows indicate direction of ploughing.
Extant ridge and furrow outline or direction	Cyan	Defines the outline of a single block of ridge and furrow seen as earthworks on the latest available remote sensed imagery. An arrow within each single block indicates the direction of ploughing.
Extent of area	Grey	Defines the extent of large features such as the perimeters of WWII airfields and military camps.
T-hachure	Dark blue	Top of the 'T' defines the top of a slope or scarp edge such as a lynchet or house platform. Body of the 'T' indicates the length and direction of the slope.
Structure	Purple	Defines the extent of surviving buildings and structures such as individual World War II Nissen Huts and pillboxes. Thin structures such as walls or concrete paths are included in this layer as a single line.

[7] Ordnance Survey; *Products and Services FAQs: How accurate are your products?*; http://www.ordnancesurvey.co.uk/oswebsite/support/products-services.html; Accessed: June 2013.
[8] Ordnance Survey; June 2013.
[9] Winton, H., (2012).
[10] Table 1 based on Winton, H., (2012), Section 7.5. P31.

2.2.25 Table 2 and Table 3 show period range and evidence range abbreviations used. The evidence abbreviations identify the form in which a feature is visible on the remote sensed imagery.

2.2.26 Information relating to each of the transcribed features was recorded in the ArcMap attribute table. This included details such as the interpretation of each feature and the remote sensed source they were transcribed from, as well as the HER and national record of the historic environment numbers for the features if applicable. These results have been set out in Table 4.

Table 2: Period range abbreviations used in the GIS attribute data

Period	Abbreviation	Date range
Neolithic	N	4,000 – 2,200 BC
Bronze Age	BA	2,200 – 700 BC
Iron Age	IA	800 BC – AD 43
Roman	RO	AD 43 – 410
Early medieval	EM	AD 410 – 1066
Medieval	MD	AD 1066 – 1540
Post-medieval	PM	AD 1540 to 1901
20th century	C20	AD 1901 – present
World War II	WWII	1939 to 1945
Uncertain	UN	

Table 3: Evidence abbreviations used in the GIS attribute data

Evidence	Abbreviation
Cropmark (includes soilmarks)	C
Earthwork	E
Levelled earthwork	LE
Destroyed monument (i.e. quarried-away)	DM
Structure	S

2.2.27 The results of this remote sensing survey and transcription have been saved in the project ArcMap MXD and have been supplied with all of the additional required metadata attached. The results have also been exported as Esri shapefiles for ease of import into other GIS programs where necessary in compiling the baseline survey.

2.3 Limitations

2.3.1 Hyperspectral imagery was not available for the survey area.

2.3.2 In some areas, the 2012 LiDAR and aerial orthophotography did not cover the full extent of the Proposed Scheme.

2.3.3 Where archaeological sites have been identified solely from remote sensed imagery without confirmation from archaeological excavation or supporting evidence in the form of find-spots etc., it should be noted that the interpretation may be revised in the light of further investigation.

2.3.4 It should be stressed that the absence of an archaeological feature on remote sensed imagery does not confirm its absence in the ground, as visibility from the air is sometimes dependent upon a complex combination of factors. These include:

- unsuitable conditions at the time of image capture (such as lighting, ground moisture content and crops or other ground cover);
- variable quality of photography;
- underlying features being masked by alluvial build-up; and
- areas where archaeological features either do not survive or have never existed.

2.3.5 During the survey, 'steps' of approximately 2m were noted at several points in the purpose-flown 2012 vertical orthophotography, where adjacent image tiles had been joined to provide continuous coverage of the route.

2.3.6 Archaeological features were not mapped beyond the boundary of the remote sensing survey study area, as the cumulative effect of this along the entire length of the route would have resulted in a significant increase in the study area. Where archaeological cropmarks, earthworks, soilmarks or structures continued beyond the study area boundary, this was noted in the attribute data of the mapped feature.

2.4 Assumptions

2.4.1 No assumptions are noted for the data or survey methods for this CFA.

2.5 Results: description

2.5.1 The primary output of the archaeological remote sensing survey of CFA07 is the detailed digital transcription of each identified potential archaeological feature. Information pertaining to the interpretation of these features is contained within the attribute data of every line and polygon drawn in GIS.

2.5.2 Table 4 itemises in detail the results of the CFA07 survey. These details originate from the GIS attribute data. The results should be read in conjunction with Figures CH004.07.01–07 of this report.

2.5.3 Where a single mapped feature has generated two lines of identical attribute data[11], the duplicate line has been removed from Table 4. Where the transcription of a site or feature consists of several lines or polygons which may have been visible on different sources, or in a different form (i.e. where different elements of the site are visible as both cropmarks and earthworks), the differing lines of the attribute data table have been retained in order to reflect these variations.

2.5.4 The aerial survey ID is the unique identifier applied to each site or feature transcribed during this project. It was not considered sufficient to use the automatically generated 'feature ID' within GIS, as this would result in a site which consisted of several different features represented by different lines and polygons having several different identifying numbers. The aerial survey ID was also used to group features, such as several interconnecting former field boundaries. This is consistent with the approach taken by English Heritage on national mapping programme projects[12]. The aerial survey ID is prefixed with a different sequential letter for each CFA. For CFA7 it is the letter 'G'.

2.5.5 The national record of the historic environment and HER columns detail the relevant monument numbers for these authorities, where such numbers exist for transcribed features.

2.5.6 The period abbreviations used are set out in Table 2.

2.5.7 As noted in Section 2.1 of this report, the interpretation types (detailed in the type column) comply with the preferred terms within the English Heritage Monument Type Thesaurus[13] in order to achieve consistency with other similar transcribed datasets.

2.5.8 The evidence abbreviations refer to the physical nature of the recorded features. These abbreviations are set out in Table 3.

2.5.9 The remote sensed imagery used to transcribe each individual feature is detailed in the source column.

2.5.10 The description column is intended as a brief interpretation only, outlining the main features or points of note.

2.5.11 The full attribute table attached to every line and polygon transcribed as part of this survey contains additional columns not displayed in Table 4, such as the date the feature was transcribed and the initials of the member of staff responsible.

[11] Such as a block of ridge and furrow, which contains this information within both the polygon that defines its extent and the line indicating the direction of ploughing.

[12] Winton, H., (2012).
[13] English Heritage; *NMR Monument Type Thesaurus*.

Table 4: Exported GIS attribute data for each transcribed feature, detailing the interpretation applied

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
G01 (CVA024)	395014	0015000000	MD / PM / UN	Motte / windmill mound	E	HS2 LiDAR 2012	Circular mound within oval ditch. Very faint trace of outer bank on southern and eastern sides. Possible motte or later windmill mound, though purpose and origin uncertain. Scheduled monument 1006945. Not on historic OS maps.
G02 (CVA106)	N/A	N/A	PM / UN	Curvilinear enclosure / ditched enclosure	C	NMR RAF-82-777 698 05-MAY-1953	Cropmark of an oval ring ditch. May relate to extensive modern gravel extraction seen in the area but the cropmark is well defined and an archaeological interpretation cannot be discounted.
G03	N/A	N/A	MD / UN	Moat / ditched enclosure	E	HS2 LiDAR 2012	A roughly square ditch is visible on LiDAR as an extant earthwork beneath trees. Possible moated site, though further investigation would be required to ascertain whether it has a more modern origin.
							Heavily-degraded linear bank visible as an earthwork within a possible moated site. May be structural remains of some sort. Area within the square ditch appears very uneven, possibly as a result of later quarrying adjacent to this bank.
							Sub-oval depression within a possible moated site. May be part of the original internal features of the site, or possibly later quarrying. There are other quarry pits nearby.
G04	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	An area of quarrying is visible on LiDAR as earthworks beneath trees. Similar piecemeal appearance to the extraction as indicated on the 4th edition OS map of 1934 for an area of 'Sand Pits' just to the north.
							An area of quarrying is visible on LiDAR as earthworks beneath trees. Adjacent to 'Sand Pits' just to the north-east, which are also visible on LiDAR but which have been recorded on the 4th edition OS map of 1934,and as such are not mapped here.
							Possible area of former quarrying is visible on LiDAR as a smooth shallow depression in the field just to the south of Dew's Dell. May have been a much earlier pit similar to the one within Dew's Dell, but later backfilled and smoothed by later ploughing
G05	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	A series of former extractive pits or quarries are visible on LiDAR as extant earthworks beneath tree cover. A couple of them have been indicated on historic OS maps, but to nowhere near their full extent.
G06	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	Several large former quarry pits are visible on LiDAR as extant earthworks beneath the trees of little Halings Wood. Not recorded on historic OS maps. Much better preserved than the examples in the field directly to the west.
G07	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	Former quarry pits are visible on LiDAR as shallow, smooth-edged hollows. Large and irregularly-shaped. Diffuse appearance due to backfilling and plough-spreading. Not recorded on historic OS maps. On chalk, so may alternatively be dolines, some of which may later have been worked as quarries.
					C	Pan-Government Agreement TQ0390 27-JUN-2010	Possible former quarry pits are visible on aerial photographs as dark cropmark maculae. Smaller than similar examples within the same field that are still faintly extant. Not recorded on historic OS maps.
						HS2 Vertical Photography TQ0390 2012	Possible former quarry pits are visible on aerial photographs as dark cropmark maculae. Smaller than similar examples within the same field that are still faintly extant. Not recorded on historic OS maps.
G08	N/A	N/A	PM / UN	Extractive pit / quarry	C / E	HS2 Vertical Photography TQ0291 2012 / HS2 LiDAR 2012	A substantial former quarry pit is visible on vertical aerial photographs and LiDAR. Not recorded on historic OS maps.
					C	Cambridge University Collection of Aerial Photography RC8DZ048 28-OCT-1981	An area of former quarrying is visible on vertical aerial photographs of 1981 as cropmarks. Not recorded on historic OS maps. May have still been in use in early 20th century, but could have had earlier origins.
G09	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	A substantial former quarry pit is visible on LiDAR as a shallow, irregularly-shaped hollow. Part of the western side is recorded on the 3rd edition OS map of 1914, but this only represents a very small proportion of the overall extent.

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
G10	N/A	N/A	MD / PM	Ridge and furrow	E / LE	NMR RAF-106G-UK-686 4132 23-AUG-1945 / NMR RAF-58-1472 340 24-JUN-1954 / HS2 LiDAR 2012	Ridge and furrow is visible as extant earthworks on a 1945 vertical aerial photograph. Modern LiDAR shows it is now levelled.
G11	N/A	N/A	MD / PM	Field boundary / boundary ditch	C	NMR OS-67324 569 21-AUG-1967	A diffuse cropmark of possible ditches which sub-divide a field into relatively small enclosures. Pre-dates the 1872 OS map and possibly related to Corner Hall (CVA085), a 16th century house located to the east (HER 17650).
G12	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	An area of possible ridge and furrow is faintly visible on LiDAR as extant earthworks. Likely to continue to the south, but this is beyond both the edge of the LiDAR coverage and the project boundary.
G13	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 Vertical Photography TQ0587 2012 / HS2 LiDAR 2012	A possible former field boundary bank is very faintly visible as a linear earthwork on both vertical aerial photographs and LiDAR. Not recorded on historic OS maps.
G14	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	A possible area of ridge and furrow is just visible on LiDAR as very faintly extant earthworks.
G15	N/A	N/A	WWII / C20 / UN	Anderson shelter / stanton shelter / reservoir	E	HS2 LiDAR 2012	A substantial sub-oval, flat-topped, turf-covered mound is visible on LiDAR. Tentative interpretation as a World War II air raid shelter suggested, though it could also have a more modern origin and purpose, such as a covered reservoir.
G16	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	A probable quarry pit is visible on LiDAR as an extant earthwork beneath trees. Not recorded on historic OS maps.
G17	N/A	0895200000	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	A former quarry is visible on LiDAR as an extant earthwork beneath the trees. The larger of the two pits visible is marked on historic OS maps, but to nowhere near its full extent.
G18	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	A series of former extractive pits or quarries are visible on LiDAR as extant earthworks beneath tree cover. A couple of them have been indicated on historic OS maps, but to nowhere near their full extent.
G19	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	A series of former extractive pits or quarries are visible on LiDAR as extant earthworks beneath tree cover. A couple of them have been indicated on historic OS maps, but to nowhere near their full extent.
G20	N/A	N/A	MD / PM	Ridge and furrow	E	HS2 LiDAR 2012	Traces of possible former ridge and furrow are just visible on LiDAR as earthworks beneath the trees of Great Halings Wood.
G21	N/A	N/A	PM / UN	Extractive pit / quarry / natural feature	E	HS2 LiDAR 2012	Possible quarry pit visible on LiDAR as a substantial earthwork beneath trees. May alternatively be a solution hollow, although it doesn't seem to be the correct geology for this. Not recorded on historic OS maps. Some dolines were later quarried.
G22	N/A	N/A	PM / UN	Extractive pit / quarry / spoil heap	E	HS2 LiDAR 2012	A probable former quarry pit is visible on LiDAR as a substantial earthwork beneath trees. Flanked on its southern side by its spoil heap. Not recorded on historic OS maps.
G23	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	Possible former quarry pits visible as large, very shallow, very smooth depressions. Similar appearance to dolines, but on wrong geology. Presence of more definite quarries nearby makes these likely to be backfilled and ploughed-out examples.
G24	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	Probable former quarry pits are visible on LiDAR as extant earthworks beneath the trees of Juniper Wood (CVA067). Not recorded on historic OS maps.
G25	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	Former quarry pits are visible on LiDAR as extant earthworks beneath trees in the grounds of Durdent Court. The larger of the three is partly indicated on the 1st Edition OS map, not to nowhere near its full extent.
				Extractive pit / quarry / spoil heap	E	HS2 LiDAR 2012	An area of possible quarrying activity is visible on LiDAR as an area of very uneven ground beneath trees. May be quarry pits and spoil heaps similar to others in the vicinity. May alternatively be landscaping of the Durdent Court grounds.
G26	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	Former quarry pits are faintly visible on LiDAR as shallow, smooth-edged hollows. This diffuse appearance will be the result of backfilling and plough-levelling. Not recorded on historic OS maps.
G27	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	Former quarry pits are faintly visible on LiDAR as shallow, smooth-edged hollows. This diffuse appearance will be the result of backfilling and plough-levelling. Not recorded on historic OS maps.

Aerial survey ID	National record of the historic environment	HER	Period	Type	Evidence	Source	Description
G28	N/A	N/A	MD / PM	Field boundary / boundary bank	C	Pan-Government Agreement TQ0390 27-JUN-2010	A possible former field boundary bank is visible on vertical aerial photographs of 2010 as light linear cropmarks. Not recorded on historic OS maps.
G29	N/A	N/A	PM / UN	Extractive pit / quarry	C	Pan-Government Agreement TQ0390 27-JUN-2010	Possible former quarry pits are visible as dark cropmark maculae on vertical aerial photographs of 2010. Not recorded on historic OS maps.
G30	N/A	N/A	PM / UN	Extractive pit / quarry	E	HS2 LiDAR 2012	A probable former quarry is visible on LiDAR as a large, shallow, irregularly-shaped hollow. Cut by a trackway. Not recorded on historic OS maps. Diffuse appearance due to backfilling and plough-spreading.
G31 (CVA107)	N/A	N/A	BA / UN	Round barrow / ring ditch	C	HS2 Vertical Photography TQ0390 2012	Slightly irregularly-shaped incomplete ring ditch visible as a cropmark. Due to high number of prehistoric findspots in the area the possibility of a prehistoric origin cannot be ignored, though a ring ditch represent many different things.
G32	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	Two linear banks which may have been former field boundaries are visible as extant earthworks on LiDAR. Not recorded on historic OS maps.
G33	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	A linear bank is visible on LiDAR as an extremely faintly extant earthwork. Almost completely plough-levelled, which accounts for its diffuse and very wide appearance. Not recorded on historic OS maps.
G34	N/A	N/A	MD / PM	Ridge and furrow	C	Pan-Government Agreement TQ0391 19-OCT-1999	A small area of levelled ridge and furrow is very faintly visible on vertical aerial photographs of 1999 as cropmarks.
G35	N/A	N/A	PM / UN	Extractive pit / quarry	C	HS2 Vertical Photography TQ0290 2012	Backfilled and levelled possible former quarry pits are visible on vertical aerial photographs as dark cropmark maculae. Not recorded on historic OS maps.
G36	N/A	N/A	PM / UN	Extractive pit / quarry	C	HS2 Vertical Photography TQ0290 2012	Backfilled and levelled possible former quarry pits are visible on vertical aerial photographs as dark cropmark maculae. Not recorded on historic OS maps.
G37	N/A	N/A	MD / PM	Field boundary / boundary bank	E	HS2 LiDAR 2012	A probable former field boundary bank is visible LiDAR as a faintly extant linear earthwork. Not recorded on historic OS maps.
G38	N/A	0851500000	WWII	Military airfield site / dispersed site	S	NMR RAF-HLA-054 60 11-AUG-1940	A possible World War II dispersed site associated with Denham airfield (CVA040) to the south-west. Buildings and a network of interconnecting pathways are visible between the trees at Wyatt's Covert. May have been administrative, medical, or barracks facilities.
G39	N/A	N/A	WWII	Heavy anti-aircraft battery	C	NMR RAF-540-494 4231 12-MAY-1951 / NMR RAF-540-526 4098 06-JUN-1951	Possible World War II heavy anti-aircraft battery visible as cropmarks of the sites of five gun emplacements arranged in a semi-circle around a central rectangular command post. Likely associated with Searchlight Battery No 505 13 nearby (national record of the historic environment1492302).
					C / DM	NMR RAF-540-494 4231 12-MAY-1951 / HS2 LiDAR 2012	Possible World War II heavy anti-aircraft battery visible as cropmarks of the sites of five gun emplacements arranged in a semi-circle around a central rectangular command post. Likely associated with Searchlight Battery No 505 13 nearby (CVA084). One further possible gun emplacement lies just to the south-west of the main group.
G40	N/A	N/A	PM / UN	Extractive pit / ditched enclosure	C	HS2 Vertical Photography TQ0390 2012	Cropmarks which are most likely to be remains of extractive pits, with differential moisture content of fills giving a curvilinear ditch appearance around the edge of the former pit. May alternatively be geological marks, or possibly genuine enclosures.

2.6 Results: interpretation

2.6.1 Forty possible archaeological features were recorded from the remote sensed imagery that was surveyed as part of this project.

2.6.2 The features ranged in date from possible Bronze Age features up to 20th century military sites and structures.

2.6.3 The possible Bronze Age feature is a slightly irregularly-shaped incomplete ring ditch (G31; CVA107) visible as a cropmark on the western side of Pynesfield Lake. This may represent a levelled round barrow. This interpretation has been proposed in part due to the high number of prehistoric findspots in the vicinity, though it is possible that a ring ditch can be indicative of many possible different types of sites, both historic and modern.

2.6.4 The study area is characterised by large-scale gravel, sand and chalk extraction which has resulted in the creation of many large lakes, particularly in the central section. Much of this extraction had already been carried out by the time of the earliest available archive aerial photographs, which in part explains the low density of features recorded here from remote sensed imagery.

2.6.5 The high resolution of the LiDAR imagery revealed the possible occurrence of dolines, or solution holes/hollows, across the landscape. Dolines are common on chalk bedrocks[14] [15], such as that of the north-western end of the study area[16]. Dolines can appear similar to the remains of former quarrying activity, but in this instance, the overwhelming frequency of their occurrence in certain areas indicated that these features were likely to be of natural origin.

2.6.6 The survey also recorded what appeared to be genuine evidence of small-to-medium scale quarrying, particularly in the north-western end of the study area. These extractive features were jagged and irregularly shaped and sometimes had accompanying spoil heaps, differentiating them from the smooth circular or oval dolines. It is not unknown for dolines to be worked as chalk pits[17], and it is possible that this may have been the origin of some of the former quarries mapped here. This pattern of small-to-medium scale quarrying may originally extended across the rest of the study area, but was later obliterated by the industrial-scale quarrying activity which now predominates to the south-east.

2.6.7 The HERs and national record of the historic environment record a high density of prehistoric artefact findspots in the study area. Many of these artefacts were uncovered during the widespread quarrying activities. This is indicative of the extent of past human activity in this area, in contrast to the low quantity of corresponding sites visible from the air.

2.6.8 The LiDAR imagery revealed a possible medieval moated site (G03) under the cover of the trees of Northmoor Hill Wood. This feature has not been recorded previously in either the HER or national record of the historic environment. A reasonably well-preserved square-shaped outer ditch can be seen, which appears to have been damaged by what may be later extractive activity at its southern corner.

2.6.9 There was one scheduled monument within the study area: a mound surrounded by an outer ditch on the south-eastern side of Savay Farm (CVA024)). It has been interpreted here as either a medieval motte or a post-medieval windmill mound. Other interpretations are also possible; for example, a landscaping feature such as a tree mound or vantage point.

2.6.10 The survey also identified sites or features associated with World War II military activity. These included:

- a possible military airfield dispersed site in a clearing between the trees of Wyatt's Covert (G38). This is likely to have been a part of Denham Airfield (CVA040), the main body of which lay to the south-west. This is now a caravan site;
- a possible air raid shelter (G15) visible on the 2012 LiDAR as an extant mound on the southern fringes of Northmoor Hill Wood. This may also have been associated with Denham Airfield (CVA040); and
- the possible site of a heavy anti-aircraft battery (G39) indicated by what may be cropmarks of the former gun positions. This site is located at the very north-western end of the study area, and has been partly obliterated by the M25.

2.7 Conclusions

2.7.1 Forty individual or grouped possible archaeological features were identified by the survey, 37 of which are not recorded by either the HER or national record of the historic environment.

2.7.2 The identified features comprise in the most part the remains of probable post-medieval quarrying and medieval or post-medieval field boundaries, although additional sites recorded included:

- a possible Bronze Age round barrow (CVA107);
- a previously-unrecorded medieval moated site in Northmoor Hill Wood (CVA052);
- a possible medieval motte or post-medieval windmill mound; and
- World War II military features associated with Denham Airfield (CVA040).

2.8 References

British Geological Survey (BGS), (2012), *Digital Geological Map of Great Britain* (DiGMapGB-10) at 1:10 000 scale, for bedrock geology and superficial deposits, Digital Data Licence No. 2012/062.

English Heritage, *NMR Monument Type Thesaurus*; http://thesaurus.english-heritage.org.uk/thesaurus.asp?thes_no=1; Accessed: August 2012 - June 2013.

Fenner, V.E.P., (1992), *Crop Marks in Hertfordshire: a report for the National Mapping Programme*, RCHME internal document.

Fenner, V.E.P., (1994), *The Thames Valley Project: a report for the National Mapping Programme*, RCHME Aerial Survey Report Series.

GeoStore; *Aerial Photography RGB Product*; http://www.geostore.com/geostore4/WebStore?xml=geostore4/xml/productsAPRGB.xml; Accessed August 2013.

[14] Wilson, D., (2000) *Air Photo Interpretation for Archaeologists*, Tempus Publishing Ltd, Stroud. P168-9.
[15] Natural Environment Research Council (NERC), (2006), *Geology of the Salisbury Sheet Area*, British Geological Society, Onshore Geology Series, Internal Report IR/06/011. P212.
[16] British Geological Survey, (2012), *Digital Geological Map of Great Britain* (DiGMapGB-10) at 1:10 000 scale, for bedrock geology and superficial deposits, Digital Data Licence No. 2012/062.
[17] NERC,(2006), P.215.

Natural Environment Research Council (NERC), (2006), *Geology of the Salisbury Sheet Area*, British Geological Society, Onshore Geology Series, Internal Report IR/06/011.

Ordnance Survey; *Products and Services FAQs: How accurate are your products?*; http://www.ordnancesurvey.co.uk/oswebsite/support/products-services.html; Accessed June 2013.

Wilson, D., (2000), *Air Photo Interpretation for Archaeologists*, Tempus Publishing Ltd, Stroud.

Winton, H., (2012), *Standards for National Mapping Programme projects, Version 0.1 Draft*, English Heritage, Aerial Investigation and Mapping, Typescript document.

2.9 Historic aerial photographs consulted

Table 5: English Heritage vertical aerial photographs consulted for the remote sensing survey of CFA7

English Heritage library number	Original sortie number	Original frame number	Date taken
228	RAF/3G/TUD/UK/229	5148	10 September 1946
228	RAF/3G/TUD/UK/229	5149	10 September 1946
228	RAF/3G/TUD/UK/229	5150	10 September 1946
228	RAF/3G/TUD/UK/229	5155	10 September 1946
228	RAF/3G/TUD/UK/229	5156	10 September 1946
535	RAF/CPE/UK/1920	3109	13 January 1947
535	RAF/CPE/UK/1920	3110	13 January 1947
535	RAF/CPE/UK/1920	3111	13 January 1947
535	RAF/CPE/UK/1920	3112	13 January 1947
535	RAF/CPE/UK/1920	3113	13 January 1947
535	RAF/CPE/UK/1920	3135	13 January 1947
535	RAF/CPE/UK/1920	3136	13 January 1947
535	RAF/CPE/UK/1920	3137	13 January 1947
535	RAF/CPE/UK/1920	3138	13 January 1947
535	RAF/CPE/UK/1920	4137	13 January 1947
535	RAF/CPE/UK/1920	4138	13 January 1947
535	RAF/CPE/UK/1920	4139	13 January 1947
535	RAF/CPE/UK/1920	4140	13 January 1947
588	RAF/CPE/UK/1965	3022	10 April 1947
588	RAF/CPE/UK/1965	3023	10 April 1947
588	RAF/CPE/UK/1965	3024	10 April 1947
588	RAF/CPE/UK/1965	3025	10 April 1947
588	RAF/CPE/UK/1965	3026	10 April 1947
588	RAF/CPE/UK/1965	3027	10 April 1947
588	RAF/CPE/UK/1965	3028	10 April 1947
588	RAF/CPE/UK/1965	3029	10 April 1947
588	RAF/CPE/UK/1965	3041	10 April 1947
588	RAF/CPE/UK/1965	3042	10 April 1947
588	RAF/CPE/UK/1965	3043	10 April 1947
588	RAF/CPE/UK/1965	3044	10 April 1947
588	RAF/CPE/UK/1965	3045	10 April 1947
588	RAF/CPE/UK/1965	3046	10 April 1947
588	RAF/CPE/UK/1965	3047	10 April 1947
588	RAF/CPE/UK/1965	3056	10 April 1947
588	RAF/CPE/UK/1965	3057	10 April 1947
588	RAF/CPE/UK/1965	3058	10 April 1947
588	RAF/CPE/UK/1965	3059	10 April 1947
588	RAF/CPE/UK/1965	3089	10 April 1947
588	RAF/CPE/UK/1965	3090	10 April 1947
588	RAF/CPE/UK/1965	3091	10 April 1947
588	RAF/CPE/UK/1965	4029	10 April 1947
588	RAF/CPE/UK/1965	4030	10 April 1947
588	RAF/CPE/UK/1965	4046	10 April 1947
588	RAF/CPE/UK/1965	4047	10 April 1947
588	RAF/CPE/UK/1965	4048	10 April 1947
588	RAF/CPE/UK/1965	4049	10 April 1947
588	RAF/CPE/UK/1965	4050	10 April 1947
588	RAF/CPE/UK/1965	4059	10 April 1947
588	RAF/CPE/UK/1965	4060	10 April 1947
588	RAF/CPE/UK/1965	4061	10 April 1947
588	RAF/CPE/UK/1965	4062	10 April 1947
588	RAF/CPE/UK/1965	4063	10 April 1947
588	RAF/CPE/UK/1965	4091	10 April 1947
588	RAF/CPE/UK/1965	4092	10 April 1947
588	RAF/CPE/UK/1965	4093	10 April 1947
623	RAF/CPE/UK/2046	5237	29 April 1947

623	RAF/CPE/UK/2046	5238	29 April 1947
623	RAF/CPE/UK/2046	5239	29 April 1947
623	RAF/CPE/UK/2046	5338	29 April 1947
623	RAF/CPE/UK/2046	5339	29 April 1947
623	RAF/CPE/UK/2046	5340	29 April 1947
623	RAF/CPE/UK/2046	5341	29 April 1947
623	RAF/CPE/UK/2046	5342	29 April 1947
623	RAF/CPE/UK/2046	5343	29 April 1947
623	RAF/CPE/UK/2046	5344	29 April 1947
668	RAF/CPE/UK/2136	3143	02 June 1947
735	RAF/CPE/UK/2239	5364	18 August 1947
735	RAF/CPE/UK/2239	5365	18 August 1947
735	RAF/CPE/UK/2239	5366	18 August 1947
1115	RAF/541/571	3034	10 June 1950
1115	RAF/541/571	3035	10 June 1950
1115	RAF/541/571	3059	10 June 1950
1115	RAF/541/571	3060	10 June 1950
1115	RAF/541/571	4001	10 June 1950
1115	RAF/541/571	4002	10 June 1950
1115	RAF/541/571	4038	10 June 1950
1115	RAF/541/571	4039	10 June 1950
1168	RAF/58/692	3031	24 May 1951
1168	RAF/58/692	3032	24 May 1951
1168	RAF/58/692	3033	24 May 1951
1170	RAF/540/496	4051	12 May 1951
1170	RAF/540/496	4052	12 May 1951
1170	RAF/540/496	4053	12 May 1951
1170	RAF/540/496	4054	12 May 1951
1176	RAF/540/494	3210	12 May 1951
1176	RAF/540/494	3211	12 May 1951
1176	RAF/540/494	3212	12 May 1951
1176	RAF/540/494	3213	12 May 1951
1176	RAF/540/494	3231	12 May 1951
1176	RAF/540/494	3232	12 May 1951
1176	RAF/540/494	3233	12 May 1951
1176	RAF/540/494	3234	12 May 1951
1176	RAF/540/494	3346	12 May 1951
1176	RAF/540/494	4209	12 May 1951
1176	RAF/540/494	4210	12 May 1951
1176	RAF/540/494	4211	12 May 1951
1176	RAF/540/494	4212	12 May 1951
1176	RAF/540/494	4227	12 May 1951
1176	RAF/540/494	4228	12 May 1951
1176	RAF/540/494	4229	12 May 1951
1176	RAF/540/494	4230	12 May 1951
1176	RAF/540/494	4231	12 May 1951
1178	RAF/540/526	3100	06 June 1951
1178	RAF/540/526	3101	06 June 1951
1178	RAF/540/526	3102	06 June 1951
1178	RAF/540/526	3103	06 June 1951
1178	RAF/540/526	3116	06 June 1951
1178	RAF/540/526	3117	06 June 1951
1178	RAF/540/526	3118	06 June 1951
1178	RAF/540/526	4096	06 June 1951
1178	RAF/540/526	4097	06 June 1951
1178	RAF/540/526	4098	06 June 1951
1178	RAF/540/526	4099	06 June 1951
1178	RAF/540/526	4110	06 June 1951
1178	RAF/540/526	4111	06 June 1951
1178	RAF/540/526	4112	06 June 1951
1178	RAF/540/526	4113	06 June 1951
1178	RAF/540/526	4114	06 June 1951
1257	RAF/540/738	3232	17 May 1952
1273	RAF/540/778	3029	19 June 1952
1273	RAF/540/778	3030	19 June 1952
1273	RAF/540/778	3031	19 June 1952

1273	RAF/540/778	4029	19 June 1952
1273	RAF/540/778	4030	19 June 1952
1273	RAF/540/778	4031	19 June 1952
1453	RAF/82/777	665	05 May 1953
1453	RAF/82/777	666	05 May 1953
1453	RAF/82/777	667	05 May 1953
1453	RAF/82/777	668	05 May 1953
1453	RAF/82/777	669	05 May 1953
1453	RAF/82/777	670	05 May 1953
1453	RAF/82/777	693	05 May 1953
1453	RAF/82/777	694	05 May 1953
1453	RAF/82/777	695	05 May 1953
1453	RAF/82/777	696	05 May 1953
1453	RAF/82/777	697	05 May 1953
1453	RAF/82/777	698	05 May 1953
1518	RAF/540/1285	20	13 April 1954
1518	RAF/540/1285	21	13 April 1954
1518	RAF/540/1285	22	13 April 1954
1518	RAF/540/1285	22	13 April 1954
1518	RAF/540/1285	23	13 April 1954
1518	RAF/540/1285	24	13 April 1954
1518	RAF/540/1285	25	13 April 1954
1518	RAF/540/1285	47	13 April 1954
1518	RAF/540/1285	48	13 April 1954
1518	RAF/540/1285	49	13 April 1954
1518	RAF/540/1285	50	13 April 1954
1518	RAF/540/1285	51	13 April 1954
1518	RAF/540/1285	52	13 April 1954
1518	RAF/540/1285	53	13 April 1954
1518	RAF/540/1285	54	13 April 1954
1518	RAF/540/1285	55	13 April 1954
1520	RAF/82/1006	135	31 August 1954
1520	RAF/82/1006	136	31 August 1954
1548	RAF/58/1472	338	24 June 1954
1548	RAF/58/1472	339	24 June 1954
1548	RAF/58/1472	340	24 June 1954
1635	RAF/82/1149	132	14 April 1955
1635	RAF/82/1149	133	14 April 1955
1652	RAF/82/1190	74	11 May 1955
1652	RAF/82/1190	75	11 May 1955
1652	RAF/82/1190	76	11 May 1955
1652	RAF/82/1190	76	11 May 1955
1652	RAF/82/1190	77	11 May 1955
1652	RAF/82/1190	77	11 May 1955
1652	RAF/82/1190	78	11 May 1955
1652	RAF/82/1190	211	11 May 1955
1652	RAF/82/1190	212	11 May 1955
1652	RAF/82/1190	213	11 May 1955
1652	RAF/82/1190	214	11 May 1955
1652	RAF/82/1190	215	11 May 1955
1652	RAF/82/1190	216	11 May 1955
1652	RAF/82/1190	279	11 May 1955
1652	RAF/82/1190	280	11 May 1955
1652	RAF/82/1190	281	11 May 1955
1652	RAF/82/1190	281	11 May 1955
1652	RAF/82/1190	282	11 May 1955
1652	RAF/82/1190	282	11 May 1955
1652	RAF/82/1190	283	11 May 1955
1652	RAF/82/1190	284	11 May 1955
2078	RAF/543/1059	144	13 September 1960
2078	RAF/543/1059	145	13 September 1960
2078	RAF/543/1059	146	13 September 1960
2078	RAF/543/1059	147	13 September 1960
2078	RAF/543/1059	148	13 September 1960
2078	RAF/543/1059	407	13 September 1960
2078	RAF/543/1059	408	13 September 1960

2078	RAF/543/1059	409	13 September 1960
2078	RAF/543/1059	410	13 September 1960
2078	RAF/543/1059	411	13 September 1960
2078	RAF/543/1059	412	13 September 1960
2078	RAF/543/1059	413	13 September 1960
2078	RAF/543/1059	413	13 September 1960
2078	RAF/543/1059	414	13 September 1960
2078	RAF/543/1059	414	13 September 1960
2078	RAF/543/1059	415	13 September 1960
2078	RAF/543/1059	415	13 September 1960
2078	RAF/543/1059	416	13 September 1960
2078	RAF/543/1059	417	13 September 1960
2078	RAF/543/1059	417	13 September 1960
2078	RAF/543/1059	418	13 September 1960
2078	RAF/543/1059	418	13 September 1960
2078	RAF/543/1059	419	13 September 1960
2078	RAF/543/1059	420	13 September 1960
2078	RAF/543/1059	421	13 September 1960
2083	RAF/58/4648	244	29 August 1961
2083	RAF/58/4648	245	29 August 1961
2083	RAF/58/4648	246	29 August 1961
2083	RAF/58/4648	247	29 August 1961
2204	RAF/58/4646	492	28 August 1961
2204	RAF/58/4646	495	28 August 1961
2204	RAF/58/4646	497	28 August 1961
2204	RAF/58/4646	498	28 August 1961
2204	RAF/58/4646	499	28 August 1961
2268	FSL/6641/2	2314	23 July 1966
2268	FSL/6641/2	2315	23 July 1966
2268	FSL/6641/2	2454	23 July 1966
2268	FSL/6641/2	2455	23 July 1966
2273	FSL/6641/3	3473	23 July 1966
2273	FSL/6641/3	3474	23 July 1966
2273	FSL/6641/3	3475	23 July 1966
2273	FSL/6641/3	3476	23 July 1966
2273	FSL/6641/3	3601	23 July 1966
2273	FSL/6641/3	3602	23 July 1966
2273	FSL/6641/3	3603	23 July 1966
2273	FSL/6641/3	3604	23 July 1966
2273	FSL/6641/3	3605	23 July 1966
2352	RAF/58/1687	55	17 March 1955
2352	RAF/58/1687	55	17 March 1955
2352	RAF/58/1687	56	17 March 1955
2352	RAF/58/1687	172	17 March 1955
2352	RAF/58/1687	173	17 March 1955
2352	RAF/58/1687	174	17 March 1955
2352	RAF/58/1687	238	17 March 1955
2352	RAF/58/1687	239	17 March 1955
2352	RAF/58/1687	242	17 March 1955
2352	RAF/58/1687	243	17 March 1955
2352	RAF/58/1687	244	17 March 1955
2352	RAF/58/1687	325	17 March 1955
2352	RAF/58/1687	326	17 March 1955
2352	RAF/58/1687	327	17 March 1955
2354	RAF/58/1671	104	03 March 1955
2354	RAF/58/1671	105	03 March 1955
2354	RAF/58/1671	149	03 March 1955
2354	RAF/58/1671	150	03 March 1955
2354	RAF/58/1671	151	03 March 1955
2354	RAF/58/1671	152	03 March 1955
2354	RAF/58/1671	152	03 March 1955
2354	RAF/58/1671	153	03 March 1955
2354	RAF/58/1671	153	03 March 1955
2354	RAF/58/1671	154	03 March 1955
2354	RAF/58/1671	154	03 March 1955
2354	RAF/58/1671	155	03 March 1955

2354	RAF/58/1671	240	03 March 1955
2354	RAF/58/1671	241	03 March 1955
2354	RAF/58/1671	242	03 March 1955
2354	RAF/58/1671	243	03 March 1955
2354	RAF/58/1671	244	03 March 1955
2354	RAF/58/1671	261	03 March 1955
2354	RAF/58/1671	262	03 March 1955
2354	RAF/58/1671	263	03 March 1955
2354	RAF/58/1671	264	03 March 1955
3555	RAF/106G/UK/686	3132	23 August 1945
3555	RAF/106G/UK/686	4132	23 August 1945
3555	RAF/106G/UK/686	4133	23 August 1945
5904	MAL/71056	105	18 May 1971
5904	MAL/71056	106	18 May 1971
5904	MAL/71056	107	18 May 1971
5906	MAL/71059	121	19 May 1971
5906	MAL/71059	122	19 May 1971
5907	MAL/71060	127	19 May 1971
5907	MAL/71060	128	19 May 1971
5907	MAL/71060	129	19 May 1971
5907	MAL/71060	130	19 May 1971
5907	MAL/71060	131	19 May 1971
5907	MAL/71060	132	19 May 1971
5907	MAL/71060	133	19 May 1971
5907	MAL/71060	134	19 May 1971
5907	MAL/71060	135	19 May 1971
5908	MAL/71063	193	20 May 1971
5908	MAL/71063	194	20 May 1971
5908	MAL/71063	195	20 May 1971
5908	MAL/71063	196	20 May 1971
5908	MAL/71063	197	20 May 1971
5908	MAL/71063	198	20 May 1971
5909	MAL/71064	5	20 May 1971
5909	MAL/71064	6	20 May 1971
5909	MAL/71064	7	20 May 1971
5909	MAL/71064	8	20 May 1971
5909	MAL/71064	9	20 May 1971
5909	MAL/71064	10	20 May 1971
5909	MAL/71064	11	20 May 1971
5909	MAL/71064	12	20 May 1971
5910	MAL/71065	120	20 May 1971
5910	MAL/71065	121	20 May 1971
5910	MAL/71065	122	20 May 1971
5910	MAL/71065	123	20 May 1971
5910	MAL/71065	124	20 May 1971
5910	MAL/71065	125	20 May 1971
5926	MAL/71097	88	13 June 1971
5926	MAL/71097	89	13 June 1971
5926	MAL/71097	90	13 June 1971
5926	MAL/71097	91	13 June 1971
5926	MAL/71097	92	13 June 1971
5932	MAL/71148	97	05 October 1971
5932	MAL/71148	98	05 October 1971
5932	MAL/71148	99	05 October 1971
5932	MAL/71148	100	05 October 1971
5932	MAL/71148	101	05 October 1971
7531	MAL/78018	111	28 May 1978
8279	RAF/HLA/478	6018	13 April 1942
8357	RAF/HLA/054	28	11 August 1940
8357	RAF/HLA/054	29	11 August 1940
8357	RAF/HLA/054	30	11 August 1940
8357	RAF/HLA/054	31	11 August 1940
8357	RAF/HLA/054	32	11 August 1940
8357	RAF/HLA/054	33	11 August 1940
8357	RAF/HLA/054	47	11 August 1940
8357	RAF/HLA/054	48	11 August 1940

8357	RAF/HLA/054	49	11 August 1940
8357	RAF/HLA/054	50	11 August 1940
8357	RAF/HLA/054	57	11 August 1940
8357	RAF/HLA/054	58	11 August 1940
8357	RAF/HLA/054	59	11 August 1940
8357	RAF/HLA/054	60	11 August 1940
8357	RAF/HLA/054	61	11 August 1940
8357	RAF/HLA/054	62	11 August 1940
8632	RAF/HLA/647	2066	22 December 1942
9520	OS/66252	35	17 September 1966
9520	OS/66252	36	17 September 1966
9520	OS/66252	37	17 September 1966
9520	OS/66252	40	17 September 1966
9520	OS/66252	41	17 September 1966
9520	OS/66252	42	17 September 1966
9520	OS/66252	75	17 September 1966
9520	OS/66252	76	17 September 1966
9520	OS/66252	77	17 September 1966
9521	OS/67323	452	20 August 1967
9521	OS/67323	453	20 August 1967
9521	OS/67323	454	20 August 1967
9521	OS/67323	458	20 August 1967
9521	OS/67323	459	20 August 1967
9521	OS/67323	460	20 August 1967
9521	OS/67323	473	20 August 1967
9521	OS/67323	474	20 August 1967
9521	OS/67323	489	20 August 1967
9521	OS/67323	490	20 August 1967
9521	OS/67323	491	20 August 1967
9521	OS/67323	494	20 August 1967
9521	OS/67323	495	20 August 1967
9521	OS/67323	496	20 August 1967
9521	OS/67323	497	20 August 1967
9521	OS/67323	498	20 August 1967
9522	OS/67324	563	21 August 1967
9522	OS/67324	564	21 August 1967
9522	OS/67324	567	21 August 1967
9522	OS/67324	568	21 August 1967
9522	OS/67324	569	21 August 1967
9522	OS/67324	570	21 August 1967
9522	OS/67324	591	21 August 1967
9522	OS/67324	592	21 August 1967
9522	OS/67324	593	21 August 1967
11445	OS/66251	153	17 September 1966
11445	OS/66251	154	17 September 1966
11641	OS/69313	84	30 June 1969
11641	OS/69313	85	30 June 1969
11641	OS/69313	86	30 June 1969
11641	OS/69313	169	30 June 1969
11641	OS/69313	170	30 June 1969
11641	OS/69313	177	30 June 1969
11641	OS/69313	178	30 June 1969
11641	OS/69313	258	30 June 1969
11641	OS/69313	354	30 June 1969
11641	OS/69313	355	30 June 1969
11641	OS/69313	356	30 June 1969
11693	OS/57T23	20	25 May 1957
11693	OS/57T23	23	25 May 1957
12771	OS/85225	8143	08 October 1985
12771	OS/85225	8144	08 October 1985
12771	OS/85225	8157	08 October 1985
12771	OS/85225	8158	08 October 1985
13650	OS/90024	150	18 March 1990
13650	OS/90024	171	18 March 1990
13650	OS/90024	172	18 March 1990
13650	OS/90024	173	18 March 1990

13650	OS/90024	186	18 March 1990
13650	OS/90024	187	18 March 1990
13650	OS/90024	188	18 March 1990
13650	OS/90024	189	18 March 1990
13650	OS/90024	190	18 March 1990
13650	OS/90024	191	18 March 1990
13650	OS/90024	203	18 March 1990
13650	OS/90024	204	18 March 1990
13650	OS/90024	205	18 March 1990
13650	OS/90024	206	18 March 1990
13650	OS/90024	225	18 March 1990
13650	OS/90024	226	18 March 1990
13650	OS/90024	227	18 March 1990
13650	OS/90024	228	18 March 1990
13650	OS/90024	229	18 March 1990
13650	OS/90024	237	18 March 1990
13650	OS/90024	238	18 March 1990
13650	OS/90024	239	18 March 1990
13650	OS/90024	240	18 March 1990
13650	OS/90024	241	18 March 1990
13650	OS/90024	242	18 March 1990
13650	OS/90024	260	18 March 1990
13650	OS/90024	261	18 March 1990
13650	OS/90024	262	18 March 1990
13650	OS/90024	263	18 March 1990
13650	OS/90024	264	18 March 1990
13650	OS/90024	265	18 March 1990
13650	OS/90024	269	18 March 1990
13651	OS/90025	359	18 March 1990
13651	OS/90025	393	18 March 1990
13651	OS/90025	394	18 March 1990
13651	OS/90025	395	18 March 1990
13651	OS/90025	396	18 March 1990
13651	OS/90025	397	18 March 1990
13651	OS/90025	439	18 March 1990
13651	OS/90025	440	18 March 1990
13651	OS/90025	441	18 March 1990
13651	OS/90025	442	18 March 1990
15408	OS/98138	87	08 August 1998
15408	OS/98138	88	08 August 1998
15408	OS/98138	89	08 August 1998
15408	OS/98138	94	08 August 1998
15408	OS/98138	95	08 August 1998
15408	OS/98138	96	08 August 1998
15408	OS/98138	200	08 August 1998
15408	OS/98138	201	08 August 1998
15408	OS/98138	202	08 August 1998
15408	OS/98138	203	08 August 1998
15408	OS/98138	278	08 August 1998
20152	OS/55T23	37	16 July 1955
20152	OS/55T23	38	16 July 1955
20152	OS/55T23	39	16 July 1955
20152	OS/55T23	40	16 July 1955
20152	OS/55T23	41	16 July 1955
20152	OS/55T23	42	16 July 1955
20152	OS/55T23	43	16 July 1955
20152	OS/55T23	44	16 July 1955
20152	OS/55T23	45	16 July 1955
20152	OS/55T23	46	16 July 1955
20152	OS/55T23	117	16 July 1955
20152	OS/55T23	118	16 July 1955
20152	OS/55T23	119	16 July 1955
20152	OS/55T23	120	16 July 1955
20152	OS/55T23	121	16 July 1955
20152	OS/55T23	122	16 July 1955
20152	OS/55T23	123	16 July 1955

20152	OS/55T23	124	16 July 1955
20152	OS/55T23	125	16 July 1955
20152	OS/55T23	126	16 July 1955
20152	OS/55T23	127	16 July 1955
22201	OS/97060	213	31 March 1997
40161	EA/AF/97C/663	4337	03 March 1997
40161	EA/AF/97C/663	4338	03 March 1997
40161	EA/AF/97C/663	4339	03 March 1997
40161	EA/AF/97C/663	4340	03 March 1997
40161	EA/AF/97C/663	4433	03 March 1997
40161	EA/AF/97C/663	4434	03 March 1997
40161	EA/AF/97C/663	4440	03 March 1997
40161	EA/AF/97C/663	4441	03 March 1997
40161	EA/AF/97C/663	4442	03 March 1997
40161	EA/AF/97C/663	4443	03 March 1997
40161	EA/AF/97C/663	4444	03 March 1997
40161	EA/AF/97C/663	4445	03 March 1997

Table 6: English Heritage oblique aerial photographs consulted for the remote sensing survey of CFA7

English Heritage photo reference	Film number	Original frame number	Date taken
TQ 0289 / 1	NMR 24777	/ 10	18 October 2007
TQ 0289 / 2	NMR 24777	/ 11	18 October 2007
TQ 0289 / 4	NMR 24777	/ 14	18 October 2007
TQ 0289 / 5	NMR 24777	/ 15	18 October 2007
TQ 0289 / 6	NMR 24777	/ 16	18 October 2007
TQ 0289 / 7	NMR 24777	/ 18	18 October 2007
TQ 0289 / 8	NMR 24777	/ 19	18 October 2007
TQ 0289 / 9	NMR 24777	/ 20	18 October 2007
TQ 0289 / 10	NMR 24777	/ 34	18 October 2007
TQ 0289 / 11	NMR 24777	/ 35	18 October 2007
TQ 0290 / 1	NMR 24776	/ 26	18 October 2007
TQ 0290 / 2	NMR 24776	/ 27	18 October 2007
TQ 0290 / 3	NMR 24776	/ 38	18 October 2007
TQ 0290 / 4	NMR 24776	/ 39	18 October 2007
TQ 0290 / 5	NMR 24776	/ 40	18 October 2007
TQ 0290 / 6	NMR 24776	/ 41	18 October 2007
TQ 0290 / 7	NMR 24776	/ 43	18 October 2007
TQ 0290 / 8	NMR 24777	/ 01	18 October 2007
TQ 0290 / 9	NMR 24777	/ 05	18 October 2007
TQ 0290 / 10	NMR 24777	/ 06	18 October 2007
TQ 0290 / 11	NMR 24777	/ 07	18 October 2007
TQ 0290 / 13	NMR 24777	/ 12	18 October 2007
TQ 0388 / 1	NMR 21094	/ 23	27 August 2001
TQ 0388 / 2	NMR 21094	/ 24	27 August 2001
TQ 0388 / 5	NMR 24777	/ 39	18 October 2007
TQ 0388 / 6	AFL 60841	/ EPW042980	September 1933
TQ 0388 / 7	AFL 60841	/ EPW042987	September 1933
TQ 0389 / 1	NMR 21382	/ 04	27 August 2001
TQ 0389 / 2	NMR 21342	/ 33	27 August 2001
TQ 0389 / 3	NMR 24777	/ 17	18 October 2007
TQ 0389 / 4	NMR 24777	/ 21	18 October 2007
TQ 0389 / 5	NMR 24777	/ 22	18 October 2007
TQ 0389 / 6	NMR 24777	/ 23	18 October 2007
TQ 0389 / 7	NMR 24777	/ 24	18 October 2007
TQ 0389 / 8	NMR 24777	/ 25	18 October 2007
TQ 0389 / 9	NMR 24777	/ 26	18 October 2007
TQ 0389 / 10	NMR 24777	/ 27	18 October 2007
TQ 0389 / 11	NMR 24777	/ 28	18 October 2007
TQ 0389 / 12	NMR 24777	/ 29	18 October 2007
TQ 0389 / 13	NMR 24777	/ 30	18 October 2007
TQ 0389 / 14	NMR 24777	/ 31	18 October 2007
TQ 0389 / 15	NMR 24777	/ 32	18 October 2007
TQ 0389 / 16	NMR 24777	/ 33	18 October 2007
TQ 0389 / 17	NMR 24777	/ 36	18 October 2007
TQ 0389 / 18	NMR 24777	/ 40	18 October 2007
TQ 0389 / 19	NMR 24777	/ 41	18 October 2007

TQ 0389 / 20	NMR 24777	/ 42	18 October 2007
TQ 0389 / 21	NMR 26628	/ 23	08 April 2010
TQ 0390 / 1	NMR 24776	/ 28	18 October 2007
TQ 0390 / 2	NMR 24776	/ 29	18 October 2007
TQ 0390 / 3	NMR 24776	/ 30	18 October 2007
TQ 0390 / 4	NMR 24776	/ 31	18 October 2007
TQ 0390 / 5	NMR 24776	/ 42	18 October 2007
TQ 0390 / 6	NMR 24776	/ 44	18 October 2007
TQ 0390 / 7	NMR 24776	/ 45	18 October 2007
TQ 0390 / 8	NMR 24998	/ 01	07 May 2008
TQ 0390 / 9	NMR 24998	/ 02	07 May 2008
TQ 0390 / 10	AFL 60071	/ EPW006666	June 1921
TQ 0391 / 1	NMR 24776	/ 25	18 October 2007
TQ 0391 / 2	NMR 24776	/ 32	18 October 2007
TQ 0391 / 3	NMR 24776	/ 33	18 October 2007
TQ 0486 / 1	AFL 60715	/ EPW034666	16 October 1930
TQ 0487 / 1	NMR 24780	/ 01	18 October 2007
TQ 0487 / 2	NMR 24780	/ 03	18 October 2007
TQ 0487 / 3	NMR 24780	/ 05	18 October 2007
TQ 0487 / 4	NMR 24780	/ 09	18 October 2007
TQ 0487 / 5	NMR 24780	/ 11	18 October 2007
TQ 0487 / 6	AFL 60715	/ EPW034670	16 October 1930
TQ 0487 / 7	AFL 60841	/ EPW042981	September 1933
TQ 0487 / 8	AFL 60841	/ EPW042982	September 1933
TQ 0487 / 9	AFL 60841	/ EPW042983	September 1933
TQ 0488 / 1	NMR 24780	/ 02	18 October 2007
TQ 0488 / 2	NMR 24780	/ 04	18 October 2007
TQ 0488 / 3	NMR 24780	/ 06	18 October 2007
TQ 0488 / 4	NMR 24780	/ 07	18 October 2007
TQ 0488 / 5	NMR 24780	/ 08	18 October 2007
TQ 0488 / 6	NMR 24780	/ 10	18 October 2007
TQ 0488 / 7	NMR 24780	/ 12	18 October 2007
TQ 0488 / 8	NMR 24780	/ 13	18 October 2007
TQ 0488 / 9	AFL 60841	/ EPW042977	September 1933
TQ 0488 / 10	AFL 60841	/ EPW042978	September 1933
TQ 0488 / 11	AFL 60841	/ EPW042979	September 1933
TQ 0488 / 12	AFL 60841	/ EPW042984	September 1933
TQ 0489 / 1	NMR 24395	/ 18	29 October 2006
TQ 0489 / 2	AFL 60841	/ EPW042985	September 1933
TQ 0490 / 3	NMR 24395	/ 19	29 October 2006
TQ 0490 / 15	NMR 24985	/ 01	07 May 2008
TQ 0490 / 16	NMR 24998	/ 03	07 May 2008
TQ 0587 / 1	AFL 60715	/ EPW034665	16 October 1930
TQ 0587 / 2	AFL 60833	/ EPW041112	May 1933
TQ 0588 / 1	CAP 8281	/ 54	02 July 1955
TQ 0588 / 2	CAP 8281	/ 55	02 July 1955
TQ 0686 / 1	NMR 24779	/ 27	18 October 2007
TQ 0686 / 2	NMR 24779	/ 29	18 October 2007
TQ 0686 / 3	AFL 60715	/ EPW034664	16 October 1930
TQ 0687 / 1	NMR 24779	/ 30	18 October 2007
TQ 0687 / 2	NMR 24779	/ 32	18 October 2007
TQ 0687 / 3	NMR 24779	/ 33	18 October 2007
TQ 0687 / 4	NMR 24779	/ 36	18 October 2007
TQ 0687 / 5	NMR 24779	/ 41	18 October 2007
TQ 0687 / 6	NMR 24779	/ 34	18 October 2007
TQ 0688 / 5	NMR 24779	/ 06	18 October 2007
TQ 0688 / 8	NMR 24779	/ 09	18 October 2007
TQ 0688 / 19	NMR 26459	/ 25	19 August 2009
TQ 0688 / 20	NMR 26459	/ 26	19 August 2009
TQ 0786 / 1	NMR 24779	/ 38	18 October 2007
TQ 0786 / 2	NMR 26629	/ 03	08 April 2010
TQ 0786 / 3	NMR 26629	/ 04	08 April 2010
TQ 0786 / 4	NMR 26629	/ 05	08 April 2010
TQ 0786 / 5	NMR 26629	/ 06	08 April 2010
TQ 0786 / 6	NMR 26629	/ 08	08 April 2010
TQ 0786 / 7	NMR 26629	/ 09	08 April 2010

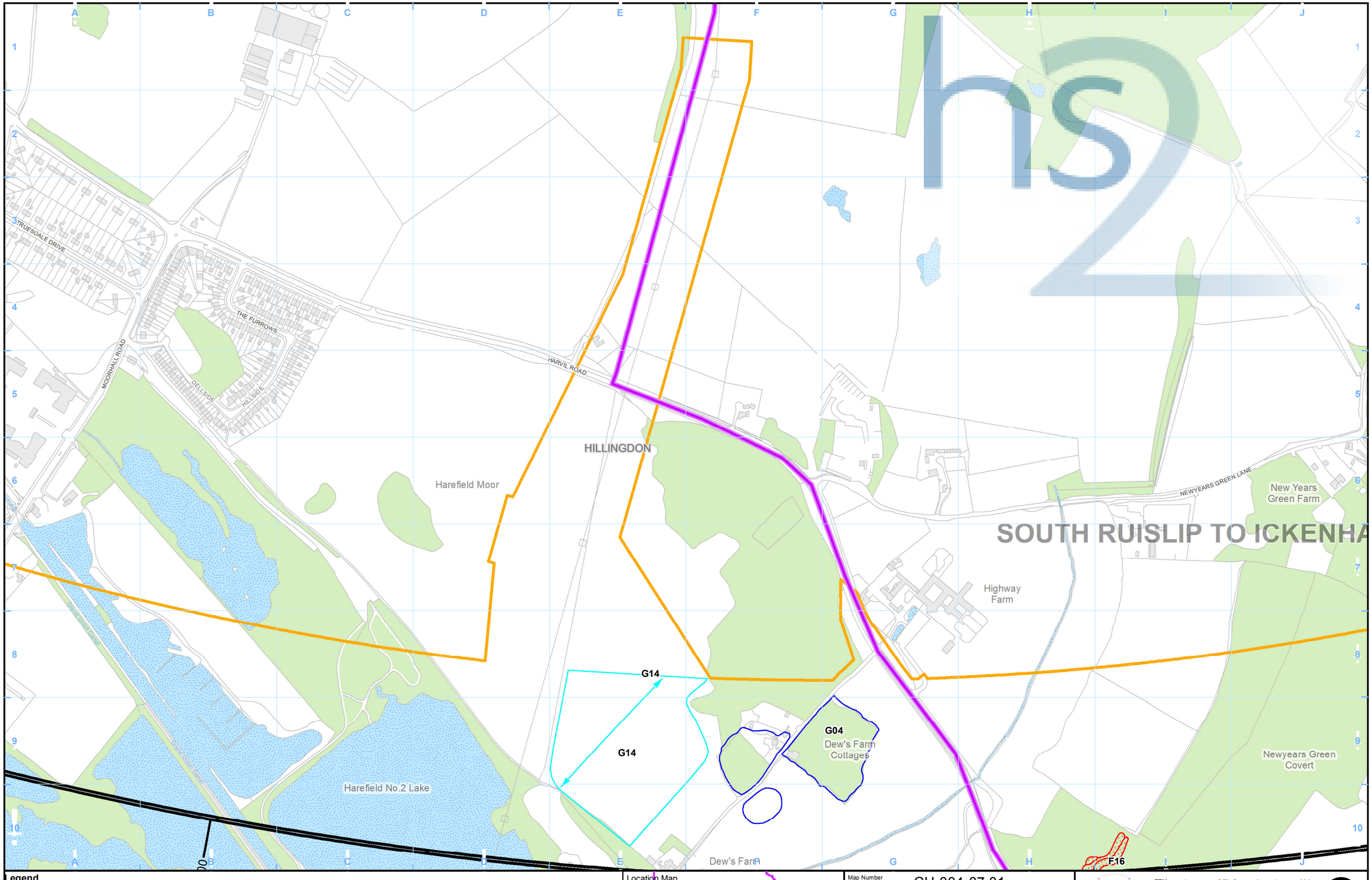
TQ 0786 / 8	AFL 60833	/ EPW041113	May 1933
TQ 0786 / 9	AFL 60833	/ EPW041114	May 1933
TQ 0787 / 1	NMR 24779	/ 28	18 October 2007
TQ 0787 / 2	NMR 24779	/ 31	18 October 2007
TQ 0787 / 4	NMR 24779	/ 35	18 October 2007
TQ 0787 / 5	NMR 24779	/ 37	18 October 2007
TQ 0787 / 6	NMR 24779	/ 39	18 October 2007
TQ 0787 / 7	NMR 24779	/ 40	18 October 2007
TQ 0787 / 8	NMR 24779	/ 42	18 October 2007
TQ 0787 / 9	NMR 24779	/ 43	18 October 2007
TQ 0787 / 10	NMR 26629	/ 01	08 April 2010
TQ 0787 / 11	NMR 26629	/ 02	08 April 2010
TQ 0787 / 12	NMR 26629	/ 07	08 April 2010

Table 7: Cambridge University Collection of Aerial Photography aerial photographs consulted for the remote sensing survey of CFA7

Cambridge University Collection of Aerial Photography catalogue number	**Date taken**	**Type**
ZknSA288	03 November 2006	Vertical
ZknSA289	03 November 2006	Vertical

2.10 Figures

CH-004-07.01	Remote sensing survey interpretation	1:5,000
CH-004-07.02	Remote sensing survey interpretation	1:5,000
CH-004-07.03	Remote sensing survey interpretation	1:5,000
CH-004-07.04	Remote sensing survey interpretation	1:5,000
CH-004-07.05	Remote sensing survey interpretation	1:5,000
CH-004-07.06	Remote sensing survey interpretation	1:5,000
CH-004-07.07	Remote sensing survey interpretation	1:5,000



Legend

- Route in tunnel
- Route on surface
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland
- Remote sensing survey boundary

Archaeological features
- Bank
- Ditch
- Extant ridge and furrow direction
- Levelled ridge and furrow direction
- Structure
- T-Hachure

- Extent of Area
- Bank
- Ditch
- Extant ridge and furrow outline
- Levelled ridge and furrow outline
- Structure
- Large cut feature

Location Map

Map Number: CH-004-07.01

Map Name: Remote Sensing Survey Interpretation

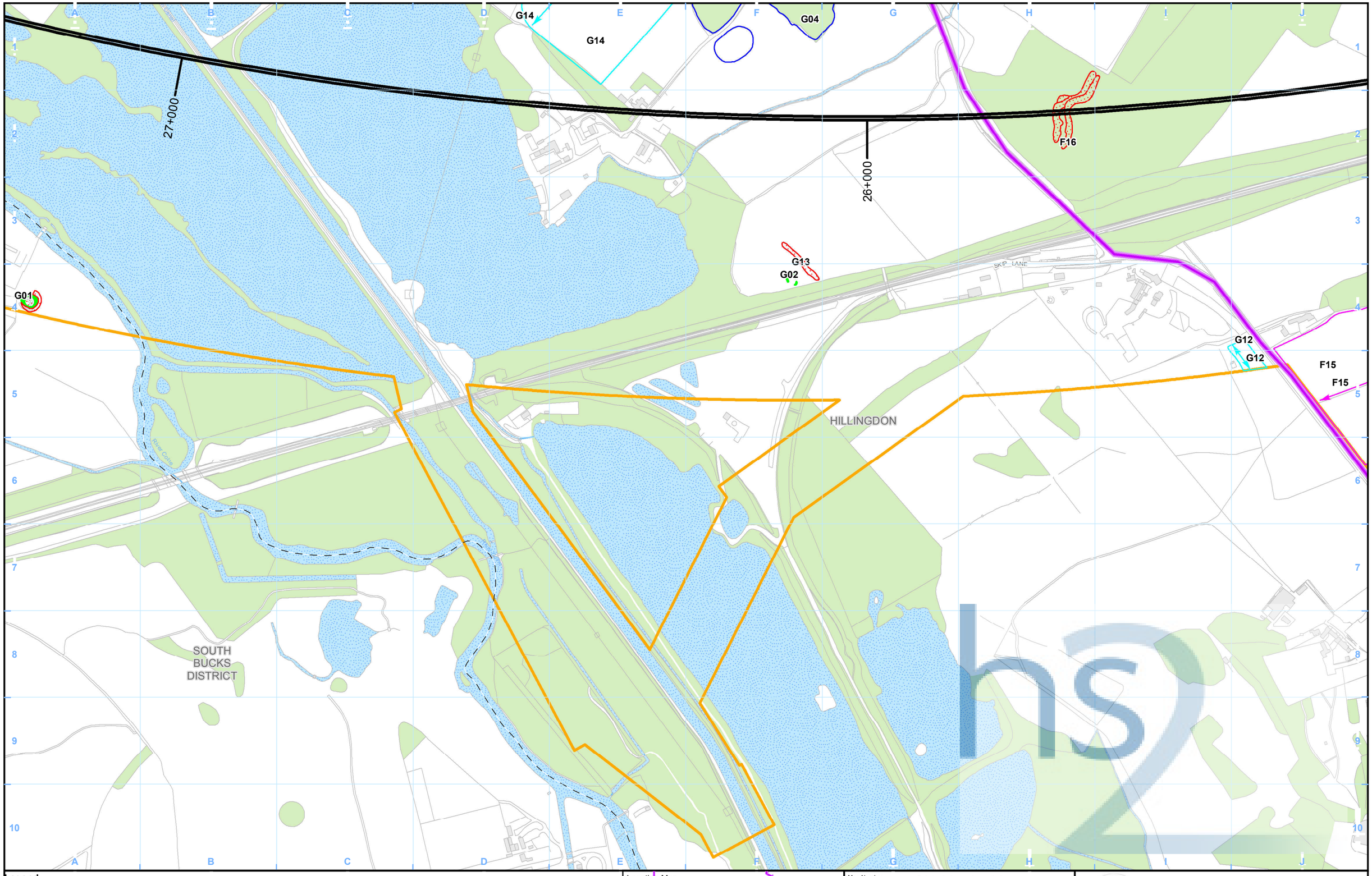
Community Forum Area CFA7: Colne Valley

Scale at A3: 1:5,000

0 50 100 150 200 Metres

Doc Number: C252-ETM-EV-MAP-020-002553-P03.00

Date: 06/09/13



Legend

- Route in tunnel
- Route on surface
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland
- Remote sensing survey boundary

Archaeological features

- Bank
- Ditch
- Extant ridge and furrow direction
- Levelled ridge and furrow direction
- Structure
- T-Hachure

- Extent of Area
- Bank
- Ditch
- Extant ridge and furrow outline
- Levelled ridge and furrow outline
- Structure
- Large cut feature

Location Map

Map Number: CH-004-07.02

Map Name: Remote Sensing Survey Interpretation

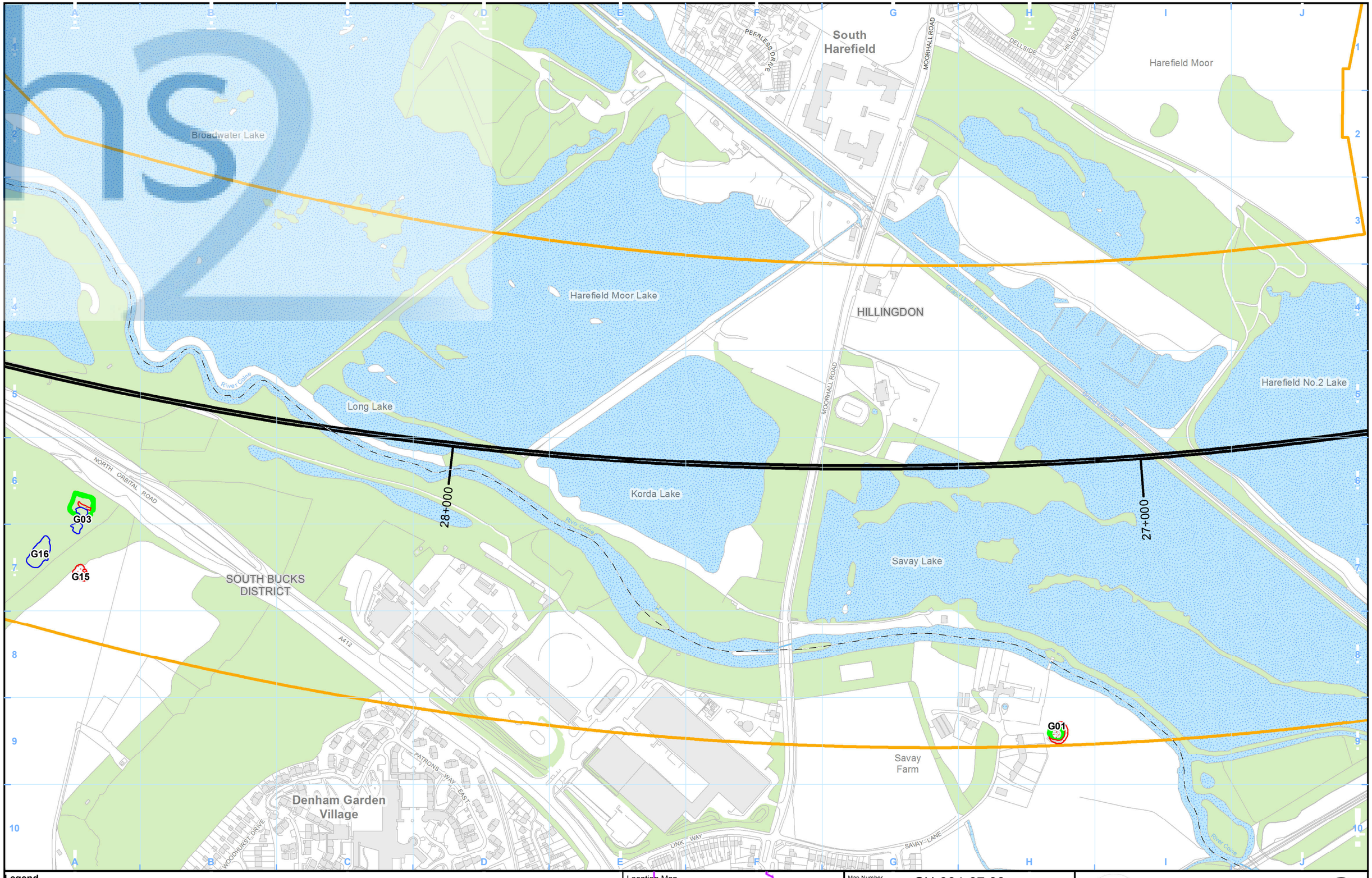
Community Forum Area CFA7: Colne Valley

Scale at A3: 1:5,000

0 50 100 150 200 Metres

Doc Number: C252-ETM-EV-MAP-020-002620-P03.00

Date: 06/09/13



Legend

- Route in tunnel
- Route on surface
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland
- Remote sensing survey boundary

Archaeological features
- Bank
- Ditch
- Extant ridge and furrow direction
- Levelled ridge and furrow direction
- Structure
- T-Hachure

- Extent of Area
- Bank
- Ditch
- Extant ridge and furrow outline
- Levelled ridge and furrow outline
- Structure
- Large cut feature

Location Map

Map Number: CH-004-07.03

Map Name: Remote Sensing Survey Interpretation

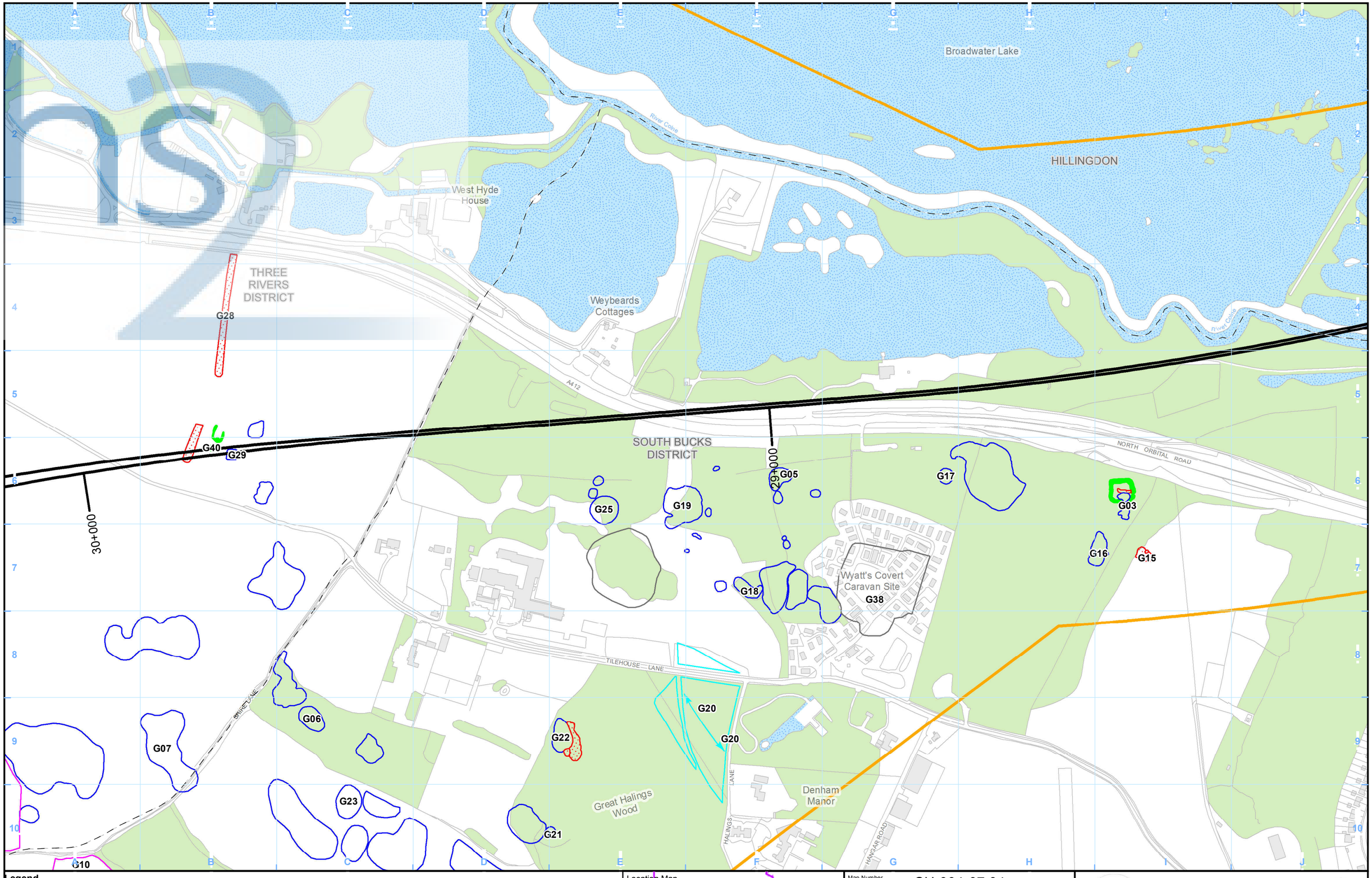
Community Forum Area CFA7: Colne Valley

Scale at A3: 1:5,000

0 50 100 150 200 Metres

Doc Number: C252-ETM-EV-MAP-020-002554-P03.00

Date: 06/09/13



Legend

- Route in tunnel
- Route on surface
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland
- Remote sensing survey boundary

Archaeological features
- Bank
- Ditch
- Extant ridge and furrow direction
- Levelled ridge and furrow direction
- Structure
- T-Hachure

- Extent of Area
- Bank
- Ditch
- Extant ridge and furrow outline
- Levelled ridge and furrow outline
- Structure
- Large cut feature

Location Map

Map Number: CH-004-07.04

Map Name: Remote Sensing Survey Interpretation

Community Forum Area CFA7: Colne Valley

Scale at A3: 1:5,000

0 50 100 150 200 Metres

Doc Number: C252-ETM-EV-MAP-020-002555-P03.00

Date: 06/09/13

OLD UXBRIDGE ROAD
DENHAM WAY (NORTH ORBITAL ROAD)
TILEHOUSE LANE
A412
River Colne
THREE RIVERS DISTRICT
HILLINGDON
SOUTH BUCKS DISTRICT
G11
G31
G34
G34
G30
G28
G33
G40
G29
G35
G05
G25
G19
G18
G38
30+000
20+000

Legend

- Route in tunnel
- Route on surface
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland
- Remote sensing survey boundary

Archaeological features
- Bank
- Ditch
- Extant ridge and furrow direction
- Levelled ridge and furrow direction
- Structure
- T-Hachure

- Extent of Area
- Bank
- Ditch
- Extant ridge and furrow outline
- Levelled ridge and furrow outline
- Structure
- Large cut feature

Location Map

Map Number: CH-004-07.05

Map Name: Remote Sensing Survey Interpretation

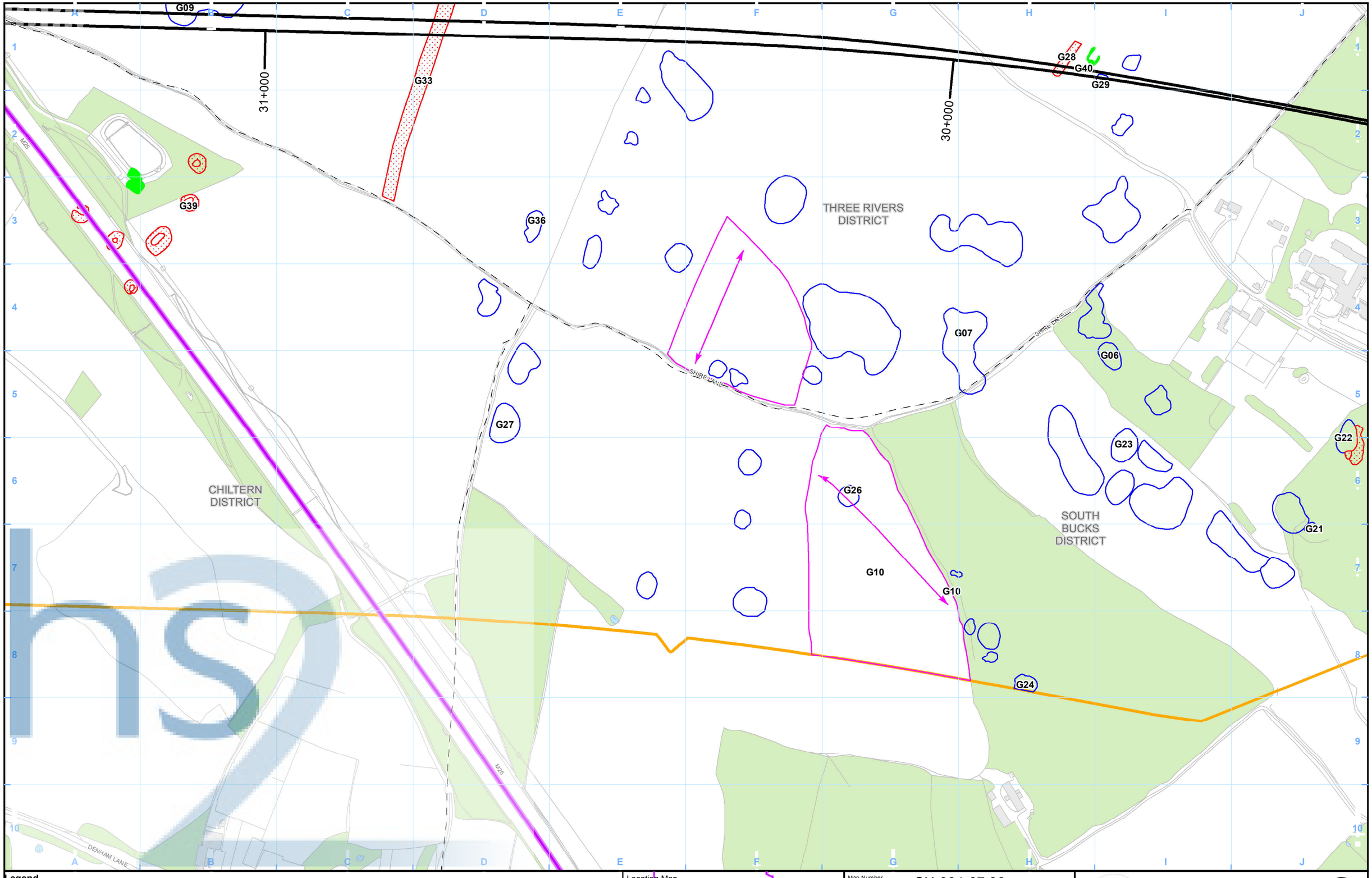
Community Forum Area CFA7: Colne Valley

Scale at A3: 1:5,000

0 50 100 150 200 Metres

Doc Number: C252-ETM-EV-MAP-020-002621-P03.00

Date: 06/09/13



Legend

- Route in tunnel
- Route on surface
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland
- Remote sensing survey boundary

Archaeological features

- Bank
- Ditch
- Extant ridge and furrow direction
- Levelled ridge and furrow direction
- Structure
- T-Hachure

- Extent of Area
- Bank
- Ditch
- Extant ridge and furrow outline
- Levelled ridge and furrow outline
- Structure
- Large cut feature

Location Map

Map Number: CH-004-07.06

Map Name: Remote Sensing Survey Interpretation

Community Forum Area CFA7: Colne Valley

Scale at A3: 1:5,000

0 50 100 150 200 Metres

Doc Number: C252-ETM-EV-MAP-020-002556-P03.00

Date: 06/09/13

COLNE VALLEY

THREE RIVERS DISTRICT

CHILTERN DISTRICT

Three Oak Farm

Caravan

HORNHILL ROAD

BUTTI EnHIDE

BRADBERY

LONG CROFT ROAD

HORSLEYS

THE HAWTHORNS

M25

SHIRE LANE

CHALFONT LANE

COPPERMILL LANE

A412

OLD UXBRIDGE ROAD

SUNNYHILL ROAD

DENHAM WAY (NORTH ORBITAL ROAD)

32+000

31+000

G32

G08

G37

G34

G34

G11

G30

G33

G09

G35

G07

Legend

- Route in tunnel
- Route on surface
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland
- Remote sensing survey boundary

Archaeological features
- Bank
- Ditch
- Extant ridge and furrow direction
- Levelled ridge and furrow direction
- Structure
- T-Hachure

Extent of Area
- Bank
- Ditch
- Extant ridge and furrow outline
- Levelled ridge and furrow outline
- Structure
- Large cut feature

Location Map

Map Number: CH-004-07.07

Map Name: Remote Sensing Survey Interpretation

Community Forum Area CFA7: Colne Valley

Scale at A3: 1:5,000

0 50 100 150 200 Metres

Doc Number: C252-ETM-EV-MAP-020-002557-P03.00

Date: 06/09/13